

VOS0068 SEQUENCE LISTING-2_ST25
SEQUENCE LISTING

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<120> Method for Identifying and Producing Effectors of
Calmodulin-Dependent Peptidyl-Prolyl cis/trans Isomerases

<130> VOS0068/US

<140> US 10/587326
<141> 2006-07-24

<150> PCT/EP05/000656
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<160> 88

<170> PatentIn version 3.5

<210> 1
<211> 4
<212> PRT
<213> Artificial sequence

<220>
<223> Chemically synthesized cAMP substrate

<400> 1
Ala Phe Pro Phe
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<210> 2
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<220>
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<400> 2
Ala Ala Glu Pro Arg
1 5

<210> 3
<211> 6
<212> PRT
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<220>
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<400> 3

VOS0068 SEQUENCE LISTING-2_ST25

Cys Phe Pro Ala Cys Phe
1 5

<210> 4
<211> 16
<212> PRT
<213> Artificial sequence

<220>
<223> Calmodulin sequence motif

<400> 4

Lys His Ala Ala Gln Arg Ser Thr Glu Thr Ala Leu Tyr Arg Lys Met
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<210> 5
<211> 327
<212> PRT
<213> Homo sapiens

<400> 5

Met Gly Gly Ser Ala Leu Asn Gln Gly Val Leu Glu Gly Asp Asp Ala
1 5 10 15

Pro Gly Gln Ser Leu Tyr Glu Arg Leu Ser Gln Arg Met Leu Asp Ile
20 25 30

Ser Gly Asp Arg Gly Val Leu Lys Asp Val Ile Arg Glu Gly Ala Gly
35 40 45

Asp Leu Val Ala Pro Asp Ala Ser Val Leu Val Lys Tyr Ser Gly Tyr
50 55 60

Leu Glu His Met Asp Arg Pro Phe Asp Ser Asn Tyr Phe Arg Lys Thr
65 70 75 80

Pro Arg Leu Met Lys Leu Gly Glu Asp Ile Thr Leu Trp Gly Met Glu
85 90 95

Leu Gly Leu Leu Ser Met Arg Arg Gly Glu Leu Ala Arg Phe Leu Phe
100 105 110

Lys Pro Asn Tyr Ala Tyr Gly Thr Leu Gly Cys Pro Pro Leu Ile Pro
115 120 125

Pro Asn Thr Thr Val Leu Phe Glu Ile Glu Leu Leu Asp Phe Leu Asp
130 135 140

Cys Ala Glu Ser Asp Lys Phe Cys Ala Leu Ser Ala Glu Gln Gln Asp
145 150 155 160

VOS0068 SEQUENCE LISTING-2_ST25

Gln Phe Pro Leu Gln Lys Val Leu Lys Val Ala Ala Thr Glu Arg Glu
165 170 175

Phe Gly Asn Tyr Leu Phe Arg Gln Asn Arg Phe Tyr Asp Ala Lys Val
180 185 190

Arg Tyr Lys Arg Ala Leu Leu Leu Leu Arg Arg Arg Ser Ala Pro Pro
195 200 205

Glu Glu Gln His Leu Val Glu Ala Ala Lys Leu Pro Val Leu Leu Asn
210 215 220

Leu Ser Phe Thr Tyr Leu Lys Leu Asp Arg Pro Thr Ile Ala Leu Cys
225 230 235 240

Tyr Gly Glu Gln Ala Leu Ile Ile Asp Gln Lys Asn Ala Lys Ala Leu
245 250 255

Phe Arg Cys Gly Gln Ala Cys Leu Leu Leu Thr Glu Tyr Gln Lys Ala
260 265 270

Arg Asp Phe Leu Val Arg Ala Gln Lys Glu Gln Pro Phe Asn His Asp
275 280 285

Ile Asn Asn Glu Leu Lys Lys Leu Ala Ser Cys Tyr Arg Asp Tyr Val
290 295 300

Asp Lys Glu Lys Glu Met Trp His Arg Met Phe Ala Pro Cys Gly Asp
305 310 315 320

Gly Ser Thr Ala Gly Glu Ser
325

<210> 6
<211> 412
<212> PRT
<213> Homo sapiens

<400> 6

Met Ala Ser Cys Ala Glu Pro Ser Glu Pro Ser Ala Pro Leu Pro Ala
1 5 10 15

Gly Val Pro Pro Leu Glu Asp Phe Glu Val Leu Asp Gly Val Glu Asp
20 25 30

Ala Glu Gly Glu Glu Glu Glu Glu Glu Glu Glu Asp Asp
35 40 45

VOS0068 SEQUENCE LISTING-2_ST25

Leu Ser Glu Leu Pro Pro Leu Glu Asp Met Gly Gln Pro Pro Ala Glu
 50 55 60
 Glu Ala Glu Gln Pro Gly Ala Leu Ala Arg Glu Phe Leu Ala Ala Met
 65 70 75 80
 Glu Pro Glu Pro Ala Pro Ala Pro Ala Pro Glu Glu Trp Leu Asp Ile
 85 90 95
 Leu Gly Asn Gly Leu Leu Arg Lys Lys Thr Leu Val Pro Gly Pro Pro
 100 105 110
 Gly Ser Ser Arg Pro Val Lys Gly Gln Val Val Thr Val His Leu Gln
 115 120 125
 Thr Ser Leu Glu Asn Gly Thr Arg Val Gln Glu Glu Pro Glu Leu Val
 130 135 140
 Phe Thr Leu Gly Asp Cys Asp Val Ile Gln Ala Leu Asp Leu Ser Val
 145 150 155 160
 Pro Leu Met Asp Val Gly Glu Thr Ala Met Val Thr Ala Asp Ser Lys
 165 170 175
 Tyr Cys Tyr Gly Pro Gln Gly Arg Ser Pro Tyr Ile Pro Pro His Ala
 180 185 190
 Ala Leu Cys Leu Glu Val Thr Leu Lys Thr Ala Val Asp Gly Pro Asp
 195 200 205
 Leu Glu Met Leu Thr Gly Gln Glu Arg Val Ala Leu Ala Asn Arg Lys
 210 215 220
 Arg Glu Cys Gly Asn Ala His Tyr Gln Arg Ala Asp Phe Val Leu Ala
 225 230 235 240
 Ala Asn Ser Tyr Asp Leu Ala Ile Lys Ala Ile Thr Ser Ser Ala Lys
 245 250 255
 Val Asp Met Thr Phe Glu Glu Glu Ala Gln Leu Leu Gln Leu Lys Val
 260 265 270
 Lys Cys Leu Asn Asn Leu Ala Ala Ser Gln Leu Lys Leu Asp His Tyr
 275 280 285
 Arg Ala Ala Leu Arg Ser Cys Ser Leu Val Leu Glu His Gln Pro Asp
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VOS0068 SEQUENCE LISTING-2_ST25
295 300

290

Asn Ile Lys Ala Leu Phe Arg Lys Gly Lys Val Leu Ala Gln Gln Gly
305 310 315 320

Glu Tyr Ser Glu Ala Ile Pro Ile Leu Arg Ala Ala Leu Lys Leu Glu
325 330 335

Pro Ser Asn Lys Thr Ile His Ala Glu Leu Ser Lys Leu Val Lys Lys
340 345 350

His Ala Ala Gln Arg Ser Thr Glu Thr Ala Leu Tyr Arg Lys Met Leu
355 360 365

Gly Asn Pro Ser Arg Leu Pro Ala Lys Cys Pro Gly Lys Gly Ala Trp
370 375 380

Ser Ile Pro Trp Lys Trp Leu Phe Gly Ala Thr Ala Val Ala Leu Gly
385 390 395 400

Gly Val Ala Leu Ser Val Val Ile Ala Ala Arg Asn
405 410

<210> 7
<211> 457
<212> PRT
<213> Homo sapiens
<400> 7

Met Thr Thr Asp Glu Gly Ala Lys Asn Asn Glu Glu Ser Pro Thr Ala
1 5 10 15

Thr Val Ala Glu Gln Gly Glu Asp Ile Thr Ser Lys Lys Asp Arg Gly
20 25 30

Val Leu Lys Ile Val Lys Arg Val Gly Asn Gly Glu Glu Thr Pro Met
35 40 45

Ile Gly Asp Lys Val Tyr Val His Tyr Lys Gly Lys Leu Ser Asn Gly
50 55 60

Lys Lys Phe Asp Ser Ser His Asp Arg Asn Glu Pro Phe Val Phe Ser
65 70 75 80

Leu Gly Lys Gly Gln Val Ile Lys Ala Trp Asp Ile Gly Val Ala Thr
85 90 95

Met Lys Lys Gly Glu Ile Cys His Leu Leu Cys Lys Pro Glu Tyr Ala
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VOS0068 SEQUENCE LISTING-2_ST25

100

105

110

Tyr Gly Ser Ala Gly Ser Leu Pro Lys Ile Pro Ser Asn Ala Thr Leu
 115 120 125
 Phe Phe Glu Ile Glu Leu Leu Asp Phe Lys Gly Glu Asp Leu Phe Glu
 130 135 140
 Asp Gly Gly Ile Ile Arg Arg Thr Lys Arg Lys Gly Glu Gly Tyr Ser
 145 150 155 160
 Asn Pro Asn Glu Gly Ala Thr Val Glu Ile His Leu Glu Gly Arg Cys
 165 170 175
 Gly Gly Arg Met Phe Asp Cys Arg Asp Val Ala Phe Thr Val Gly Glu
 180 185 190
 Gly Glu Asp His Asp Ile Pro Ile Gly Ile Asp Lys Ala Leu Glu Lys
 195 200 205
 Met Gln Arg Glu Glu Gln Cys Ile Leu Tyr Leu Gly Pro Arg Tyr Gly
 210 215 220
 Phe Gly Glu Ala Gly Lys Pro Lys Phe Gly Ile Glu Pro Asn Ala Glu
 225 230 235 240
 Leu Ile Tyr Glu Val Thr Leu Lys Ser Phe Glu Lys Ala Lys Glu Ser
 245 250 255
 Trp Glu Met Asp Thr Lys Glu Lys Leu Glu Gln Ala Ala Ile Val Lys
 260 265 270
 Glu Lys Gly Thr Val Tyr Phe Lys Gly Gly Lys Tyr Met Gln Ala Val
 275 280 285
 Ile Gln Tyr Gly Lys Ile Val Ser Trp Leu Glu Met Glu Tyr Gly Leu
 290 295 300
 Ser Glu Lys Glu Ser Lys Ala Ser Glu Ser Phe Leu Leu Ala Ala Phe
 305 310 315 320
 Leu Asn Leu Ala Met Cys Tyr Leu Lys Leu Arg Glu Tyr Thr Lys Ala
 325 330 335
 Val Glu Cys Cys Asp Lys Ala Leu Gly Leu Asp Ser Ala Asn Glu Lys
 340 345 350

VOS0068 SEQUENCE LISTING-2_ST25

Gly Leu Tyr Arg Arg Gly Glu Ala Gln Leu Leu Met Asn Glu Phe Glu
355 360 365

Ser Ala Lys Gly Asp Phe Glu Lys Val Leu Glu Val Asn Pro Gln Asn
370 375 380

Lys Ala Ala Arg Leu Gln Ile Ser Met Cys Gln Lys Lys Ala Lys Glu
385 390 395 400

His Asn Glu Arg Asp Arg Arg Ile Tyr Ala Asn Met Phe Lys Lys Phe
405 410 415

Ala Glu Gln Asp Ala Lys Glu Glu Ala Asn Lys Ala Met Gly Lys Lys
420 425 430

Thr Ser Glu Gly Val Thr Asn Glu Lys Gly Thr Asp Ser Gln Ala Met
435 440 445

Glu Glu Glu Lys Pro Glu Gly His Val
450 455

<210> 8

<211> 459

<212> PRT

<213> Homo sapiens

<400> 8

Met Thr Ala Glu Glu Met Lys Ala Thr Glu Ser Gly Ala Gln Ser Ala
1 5 10 15

Pro Leu Pro Met Glu Gly Val Asp Ile Ser Pro Lys Gln Asp Glu Gly
20 25 30

Val Leu Lys Val Ile Lys Arg Glu Gly Thr Gly Thr Glu Met Pro Met
35 40 45

Ile Gly Asp Arg Val Phe Val His Tyr Thr Gly Trp Leu Leu Asp Gly
50 55 60

Thr Lys Phe Asp Ser Ser Leu Asp Arg Lys Asp Lys Phe Ser Phe Asp
65 70 75 80

Leu Gly Lys Gly Glu Val Ile Lys Ala Trp Asp Ile Ala Ile Ala Thr
85 90 95

Met Lys Val Gly Glu Val Cys His Ile Thr Cys Lys Pro Glu Tyr Ala
100 105 110

VOS0068 SEQUENCE LISTING-2_ST25

Tyr Gly Ser Ala Gly Ser Pro Pro Lys Ile Pro Pro Asn Ala Thr Leu
115 120 125

Val Phe Glu Val Glu Leu Phe Glu Phe Lys Gly Glu Asp Leu Thr Glu
130 135 140

Glu Glu Asp Gly Gly Ile Ile Arg Arg Ile Gln Thr Arg Gly Glu Gly
145 150 155 160

Tyr Ala Lys Pro Asn Glu Gly Ala Ile Val Glu Val Ala Leu Glu Gly
165 170 175

Tyr Tyr Lys Asp Lys Leu Phe Asp Gln Arg Glu Leu Arg Phe Glu Ile
180 185 190

Gly Glu Gly Glu Asn Leu Asp Leu Pro Tyr Gly Leu Glu Arg Ala Ile
195 200 205

Gln Arg Met Glu Lys Gly Glu His Ser Ile Val Tyr Leu Lys Pro Ser
210 215 220

Tyr Ala Phe Gly Ser Val Gly Lys Glu Lys Phe Gln Ile Pro Pro Asn
225 230 235 240

Ala Glu Leu Lys Tyr Glu Leu His Leu Lys Ser Phe Glu Lys Ala Lys
245 250 255

Glu Ser Trp Glu Met Asn Ser Glu Glu Lys Leu Glu Gln Ser Thr Ile
260 265 270

Val Lys Glu Arg Gly Thr Val Tyr Phe Lys Glu Gly Lys Tyr Lys Gln
275 280 285

Ala Leu Leu Gln Tyr Lys Lys Ile Val Ser Trp Leu Glu Tyr Glu Ser
290 295 300

Ser Phe Ser Asn Glu Glu Ala Gln Lys Ala Gln Ala Leu Arg Leu Ala
305 310 315 320

Ser His Leu Asn Leu Ala Met Cys His Leu Lys Leu Gln Ala Phe Ser
325 330 335

Ala Ala Ile Glu Ser Cys Asn Lys Ala Leu Glu Leu Asp Ser Asn Asn
340 345 350

Glu Lys Gly Leu Phe Arg Arg Gly Glu Ala His Leu Ala Val Asn Asp
355 360 365

VOS0068 SEQUENCE LISTING-2_ST25

Phe Glu Leu Ala Arg Ala Asp Phe Gln Lys Val Leu Gln Leu Tyr Pro
370 375 380

Asn Asn Lys Ala Ala Lys Thr Gln Leu Ala Val Cys Gln Gln Arg Ile
385 390 395 400

Arg Arg Gln Leu Ala Arg Glu Lys Lys Leu Tyr Ala Asn Met Phe Glu
405 410 415

Arg Leu Ala Glu Glu Glu Asn Lys Ala Lys Ala Glu Ala Ser Ser Gly
420 425 430

Asp His Pro Thr Asp Thr Glu Met Lys Glu Glu Gln Lys Ser Asn Thr
435 440 445

Ala Gly Ser Gln Ser Gln Val Glu Thr Glu Ala
450 455

<210> 9
<211> 370
<212> PRT
<213> Homo sapiens

<400> 9

Met Ser His Pro Ser Pro Gln Ala Lys Pro Ser Asn Pro Ser Asn Pro
1 5 10 15

Arg Val Phe Phe Asp Val Asp Ile Gly Gly Glu Arg Val Gly Arg Ile
20 25 30

Val Leu Glu Leu Phe Ala Asp Ile Val Pro Lys Thr Ala Glu Asn Phe
35 40 45

Arg Ala Leu Cys Thr Gly Glu Lys Gly Ile Gly His Thr Thr Gly Lys
50 55 60

Pro Leu His Phe Lys Gly Cys Pro Phe His Arg Ile Ile Lys Lys Phe
65 70 75 80

Met Ile Gln Gly Gly Asp Phe Ser Asn Gln Asn Gly Thr Gly Gly Glu
85 90 95

Ser Ile Tyr Gly Glu Lys Phe Glu Asp Glu Asn Phe His Tyr Lys His
100 105 110

Asp Arg Glu Gly Leu Leu Ser Met Ala Asn Ala Gly Arg Asn Thr Asn
115 120 125

VOS0068 SEQUENCE LISTING-2_ST25

Gly Ser Gln Phe Phe Ile Thr Thr Val Pro Thr Pro His Leu Asp Gly
130 135 140

Lys His Val Val Phe Gly Gln Val Ile Lys Gly Ile Gly Val Ala Arg
145 150 155 160

Ile Leu Glu Asn Val Glu Val Lys Gly Glu Lys Pro Ala Lys Leu Cys
165 170 175

Val Ile Ala Glu Cys Gly Glu Leu Lys Glu Gly Asp Asp Gly Gly Ile
180 185 190

Phe Pro Lys Asp Gly Ser Gly Asp Ser His Pro Asp Phe Pro Glu Asp
195 200 205

Ala Asp Ile Asp Leu Lys Asp Val Asp Lys Ile Leu Leu Ile Thr Glu
210 215 220

Asp Leu Lys Asn Ile Gly Asn Thr Phe Phe Lys Ser Gln Asn Trp Glu
225 230 235 240

Met Ala Ile Lys Lys Tyr Ala Glu Val Leu Arg Tyr Val Asp Ser Ser
245 250 255

Lys Ala Val Ile Glu Thr Ala Asp Arg Ala Lys Leu Gln Pro Ile Ala
260 265 270

Leu Ser Cys Val Leu Asn Ile Gly Ala Cys Lys Leu Lys Met Ser Asn
275 280 285

Trp Gln Gly Ala Ile Asp Ser Cys Leu Glu Ala Leu Glu Leu Asp Pro
290 295 300

Ser Asn Thr Lys Ala Leu Tyr Arg Arg Ala Gln Gly Trp Gln Gly Leu
305 310 315 320

Lys Glu Tyr Asp Gln Ala Leu Ala Asp Leu Lys Lys Ala Gln Gly Ile
325 330 335

Ala Pro Glu Asp Lys Ala Ile Gln Ala Glu Leu Leu Lys Val Lys Gln
340 345 350

Lys Ile Lys Ala Gln Lys Asp Lys Glu Lys Ala Val Tyr Ala Lys Met
355 360 365

Phe Ala
370

VOS0068 SEQUENCE LISTING-2_ST25

<210> 10
 <211> 553
 <212> PRT
 <213> Zea mays

<400> 10

Met Asp Glu Asp Phe Glu Met Pro Pro Ala Gly Ala Asp Glu Met Met
 1 5 10 15

Gly Asp Asp Glu Met Gly Asp Phe Gly Gly Asp Glu Gly Pro Val Met
 20 25 30

Lys Val Gly Glu Glu Lys Glu Val Gly Lys Glu Gly Leu Lys Lys Lys
 35 40 45

Leu Leu Lys Glu Gly Glu Gly Trp Glu Thr Pro Glu Val Gly Asp Glu
 50 55 60

Val Glu Val His Tyr Thr Gly Thr Leu Leu Asp Gly Thr Lys Phe Asp
 65 70 75 80

Ser Ser Arg Asp Arg Gly Glu Pro Phe Lys Phe Lys Leu Gly Gln Gly
 85 90 95

Gln Val Ile Lys Gly Trp Asp Gln Gly Ile Lys Thr Met Lys Lys Gly
 100 105 110

Glu Asn Ala Ile Phe Thr Ile Pro Pro Glu Leu Ala Tyr Gly Ala Ser
 115 120 125

Gly Ser Pro Pro Thr Ile Pro Pro Asn Ala Thr Leu Gln Phe Asp Val
 130 135 140

Glu Leu Leu Ser Trp Thr Ser Val Lys Asp Ile Cys Lys Asp Gly Gly
 145 150 155 160

Ile Phe Lys Lys Ile Leu Lys Glu Gly Glu Lys Trp Glu Asn Pro Lys
 165 170 175

Asp Pro Asp Glu Val Leu Val Lys Tyr Glu Ala Arg Leu Glu Asp Gly
 180 185 190

Thr Val Val Ser Lys Ser Glu Gly Val Glu Phe Thr Val Lys Asp Gly
 195 200 205

Tyr Phe Cys Pro Ala Leu Ala Lys Ala Val Lys Thr Met Lys Lys Ala
 210 215 220

VOS0068 SEQUENCE LISTING-2_ST25

Glu Lys Val Leu Leu Thr Val Lys Pro Gln Tyr Gly Phe Gly Glu Lys
 225 230 235 240
 Gly Arg Pro Ala Ala Gly Glu Glu Gly Ala Val Pro Pro Asn Ala Ser
 245 250 255
 Leu Leu Ile Asp Leu Glu Leu Ile Ser Trp Lys Thr Val Thr Glu Ile
 260 265 270
 Gly Asp Asp Lys Lys Ile Leu Lys Lys Val Leu Lys Glu Gly Glu Gly
 275 280 285
 Tyr Glu Arg Pro Asn Glu Gly Ala Val Val Glu Val Lys Ile Ile Gly
 290 295 300
 Lys Leu Gln Asp Gly Ala Val Phe Thr Lys Lys Gly His Asp Glu Glu
 305 310 315 320
 Pro Phe Lys Phe Lys Thr Asp Glu Glu Glu Val Ile Ala Gly Leu Asp
 325 330 335
 Arg Ala Val Leu Asn Met Lys Lys Gly Glu Val Ala Leu Val Thr Ile
 340 345 350
 Pro Pro Glu Tyr Ala Phe Gly Ser Thr Glu Ser Lys Gln Asp Leu Ala
 355 360 365
 Val Val Pro Pro Asn Ser Thr Val Ile Tyr Glu Val Glu Leu Ile Ser
 370 375 380
 Phe Val Lys Asp Lys Glu Ser Trp Asp Leu Asn Asn Glu Glu Lys Ile
 385 390 395 400
 Glu Ala Ala Gly Lys Lys Lys Glu Glu Gly Asn Ala Leu Phe Lys Ser
 405 410 415
 Gly Lys Tyr Ala Arg Ala Ser Lys Arg Tyr Glu Lys Ala Ala Lys Tyr
 420 425 430
 Ile Glu Tyr Asp Thr Ser Phe Ser Glu Asp Glu Lys Lys Gln Ser Lys
 435 440 445
 Gln Leu Lys Ile Ser Cys Asn Leu Asn Asn Ala Ala Cys Lys Leu Lys
 450 455 460
 Leu Lys Asp Tyr Lys Glu Ala Ala Lys Leu Cys Thr Lys Val Leu Glu
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VOS0068 SEQUENCE LISTING-2_ST25

465 470 475 480

Leu Asp Ser Gln Asn Val Lys Ala Leu Tyr Arg Arg Val Gln Ala Tyr
485 490 495

Ile Gln Leu Ala Asp Leu Glu Leu Ala Glu Ala Asp Ile Lys Lys Ala
500 505 510

Leu Glu Ile Asp Pro Asp Asn Arg Asp Val Lys Leu Glu Tyr Lys Ile
515 520 525

Leu Lys Glu Lys Ile Lys Glu Tyr Asn Lys Lys Asp Ala Lys Phe Tyr
530 535 540

Ser Asn Met Phe Ala Lys Met Thr Lys
545 550

<210> 11

<211> 365

<212> PRT

<213> Arabidopsis thaliana

<400> 11

Met Asp Glu Ser Leu Glu His Gln Thr Gln Thr His Asp Gln Glu Ser
1 5 10 15

Glu Ile Val Thr Glu Gly Ser Ala Val Val His Ser Glu Pro Ser Gln
20 25 30

Glu Gly Asn Val Pro Pro Lys Val Asp Ser Glu Ala Glu Val Leu Asp
35 40 45

Glu Lys Val Ser Lys Gln Ile Ile Lys Glu Gly His Gly Ser Lys Pro
50 55 60

Ser Lys Tyr Ser Thr Cys Phe Leu His Tyr Arg Ala Trp Thr Lys Asn
65 70 75 80

Ser Gln His Lys Phe Glu Asp Thr Trp His Glu Gln Gln Pro Ile Glu
85 90 95

Leu Val Leu Gly Lys Glu Lys Lys Glu Leu Ala Gly Leu Ala Ile Gly
100 105 110

Val Ala Ser Met Lys Ser Gly Glu Arg Ala Leu Val His Val Gly Trp
115 120 125

Glu Leu Ala Tyr Gly Lys Glu Gly Asn Phe Ser Phe Pro Asn Val Pro
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VOS0068 SEQUENCE LISTING-2_ST25

130

135

140

Pro Met Ala Asp Leu Leu Tyr Glu Val Glu Val Ile Gly Phe Asp Glu
145 150 155 160

Thr Lys Glu Gly Lys Ala Arg Ser Asp Met Thr Val Glu Glu Arg Ile
165 170 175

Gly Ala Ala Asp Arg Arg Lys Met Asp Gly Asn Ser Leu Phe Lys Glu
180 185 190

Glu Lys Leu Glu Glu Ala Met Gln Gln Tyr Glu Met Ala Ile Ala Tyr
195 200 205

Met Gly Asp Asp Phe Met Phe Gln Leu Tyr Gly Lys Tyr Gln Asp Met
210 215 220

Ala Leu Ala Val Lys Asn Pro Cys His Leu Asn Ile Ala Ala Cys Leu
225 230 235 240

Ile Lys Leu Lys Arg Tyr Asp Glu Ala Ile Gly His Cys Asn Ile Val
245 250 255

Leu Thr Glu Glu Glu Lys Asn Pro Lys Ala Leu Phe Arg Arg Gly Lys
260 265 270

Ala Lys Ala Glu Leu Gly Gln Met Asp Ser Ala Arg Asp Asp Phe Arg
275 280 285

Lys Ala Gln Lys Tyr Ala Pro Asp Asp Lys Ala Ile Arg Arg Glu Leu
290 295 300

Arg Ala Leu Ala Glu Gln Glu Lys Ala Leu Tyr Gln Lys Gln Lys Glu
305 310 315 320

Met Tyr Lys Gly Ile Phe Lys Gly Lys Asp Glu Gly Gly Ala Lys Ser
325 330 335

Lys Ser Leu Phe Trp Leu Ile Val Leu Trp Gln Trp Phe Val Ser Leu
340 345 350

Phe Ser Arg Ile Phe Arg Arg His Arg Val Lys Ala Asp
355 360 365

<210> 12
<211> 330
<212> PRT
<213> Homo sapiens

VOS0068 SEQUENCE LISTING-2_ST25

<400> 12

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Met Ala Asp Ile Ile Ala Arg Leu Arg Glu Asp Gly Ile Gln Lys Arg
1      5      10      15

Val Ile Gln Glu Gly Arg Gly Glu Leu Pro Asp Phe Gln Asp Gly Thr
20      25      30

Lys Ala Thr Phe His Tyr Arg Thr Leu His Ser Asp Asp Glu Gly Thr
35      40      45

Val Leu Asp Asp Ser Arg Ala Arg Gly Lys Pro Met Glu Leu Ile Ile
50      55      60

Gly Lys Lys Phe Lys Leu Pro Val Trp Glu Thr Ile Val Cys Thr Met
65      70      75      80

Arg Glu Gly Glu Ile Ala Gln Phe Leu Cys Asp Ile Lys His Val Val
85      90      95

Leu Tyr Pro Leu Val Ala Lys Ser Leu Arg Asn Ile Ala Val Gly Lys
100     105     110

Asp Pro Leu Glu Gly Gln Arg His Cys Cys Gly Val Ala Gln Met Arg
115     120     125

Glu His Ser Ser Leu Gly His Ala Asp Leu Asp Ala Leu Gln Gln Asn
130     135     140

Pro Gln Pro Leu Ile Phe His Met Glu Met Leu Lys Val Glu Ser Pro
145     150     155     160

Gly Thr Tyr Gln Gln Asp Pro Trp Ala Met Thr Asp Glu Glu Lys Ala
165     170     175

Lys Ala Val Pro Leu Ile His Gln Glu Gly Asn Arg Leu Tyr Arg Glu
180     185     190

Gly His Val Lys Glu Ala Ala Ala Lys Tyr Tyr Asp Ala Ile Ala Cys
195     200     205

Leu Lys Asn Leu Gln Met Lys Glu Gln Pro Gly Ser Pro Glu Trp Ile
210     215     220

Gln Leu Asp Gln Gln Ile Thr Pro Leu Leu Leu Asn Tyr Cys Gln Cys
225     230     235     240

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VOS0068 SEQUENCE LISTING-2_ST25

Lys Leu Val Val Glu Tyr Tyr Glu Val Leu Asp His Cys Ser
245 250 255

Ile Leu Asn Lys Tyr Asp Asp Asn Val Lys Ala Tyr Phe Lys Arg Gly
260 265 270

Lys Ala His Ala Ala Val Trp Asn Ala Gln Glu Ala Gln Ala Asp Phe
275 280 285

Ala Lys Val Leu Glu Leu Asp Pro Ala Leu Ala Pro Val Val Ser Arg
290 295 300

Glu Leu Gln Ala Leu Glu Ala Arg Ile Arg Gln Lys Asp Glu Glu Asp
305 310 315 320

Lys Ala Arg Phe Arg Gly Ile Phe Ser His
325 330

<210> 13
<211> 330
<212> PRT
<213> Cercopithecus aethiops

<400> 13

Met Ala Asp Ile Ile Ala Arg Leu Arg Glu Asp Gly Ile Gln Lys Arg
1 5 10 15

Val Ile Gln Glu Gly Arg Gly Glu Leu Pro Asp Phe Gln Asp Gly Thr
20 25 30

Lys Ala Thr Phe His Tyr Arg Thr Leu His Ser Asp Asn Glu Gly Thr
35 40 45

Val Leu Asp Asp Ser Arg Val Arg Gly Lys Pro Met Glu Leu Ile Ile
50 55 60

Gly Lys Lys Phe Lys Leu Pro Val Trp Glu Thr Ile Val Cys Thr Met
65 70 75 80

Arg Glu Gly Glu Ile Ala Gln Phe Leu Cys Asp Ile Lys His Val Val
85 90 95

Leu Tyr Pro Leu Val Ala Lys Ser Leu Gly Asn Ile Ala Val Gly Lys
100 105 110

Asp Pro Leu Glu Gly Gln Arg His Cys Cys Gly Val Ala Gln Met His
115 120 125

VOS0068 SEQUENCE LISTING-2_ST25

Glu His Ser Ser Leu Gly His Ala Asp Leu Asp Ala Leu Gln Gln Asn
130 135 140

Pro Gln Pro Leu Val Phe His Met Glu Met Leu Lys Val Glu Ser Pro
145 150 155 160

Gly Thr Tyr Gln Gln Asp Pro Trp Ala Met Thr Asp Glu Glu Lys Ala
165 170 175

Lys Ala Val Pro Leu Ile His Gln Glu Gly Asn Arg Leu Tyr Arg Glu
180 185 190

Gly His Val Lys Glu Ala Ala Ala Lys Tyr Tyr Asp Ala Ile Ala Cys
195 200 205

Leu Lys Asn Leu Gln Met Lys Glu Gln Pro Gly Ser Pro Glu Trp Ile
210 215 220

Gln Leu Asp Gln Gln Ile Thr Pro Leu Leu Leu Asn Tyr Cys Gln Cys
225 230 235 240

Lys Leu Val Ala Glu Glu Tyr Tyr Glu Val Leu Asp His Cys Ser Ser
245 250 255

Ile Leu Asn Lys Tyr Asp Asp Asn Val Lys Ala Tyr Phe Lys Arg Gly
260 265 270

Lys Ala His Ala Ala Val Trp Asn Ala Gln Glu Ala Gln Ala Asp Phe
275 280 285

Ala Lys Val Leu Glu Leu Asp Pro Ala Leu Ala Pro Val Val Ser Arg
290 295 300

Glu Leu Arg Ala Leu Glu Ala Arg Ile Arg Gln Lys Asp Glu Glu Asp
305 310 315 320

Lys Ala Arg Phe Arg Gly Ile Phe Ser His
325 330

<210> 14

<211> 330

<212> PRT

<213> Mus musculus

<400> 14

Met Ala Asp Leu Ile Ala Arg Leu Arg Glu Asp Gly Ile Gln Lys Arg
1 5 10 15

VOS0068 SEQUENCE LISTING-2_ST25

Val Ile Gln Glu Gly Arg Gly Glu Leu Pro Asp Phe Gln Asp Gly Thr
20 25 30

Lys Ala Thr Phe His Phe Arg Thr Leu His Ser Asp Asn Glu Gly Ser
35 40 45

Val Ile Asp Asp Ser Arg Thr Arg Gly Lys Pro Met Glu Leu Ile Val
50 55 60

Gly Lys Lys Phe Lys Leu Pro Val Trp Glu Thr Ile Val Cys Thr Met
65 70 75 80

Arg Glu Gly Glu Ile Ala Gln Phe Leu Cys Asp Ile Lys His Val Val
85 90 95

Leu Tyr Pro Leu Val Ala Lys Ser Leu Arg Asn Ile Ala Glu Gly Lys
100 105 110

Asp Pro Leu Glu Gly Gln Arg His Cys Cys Gly Ile Ala Gln Met His
115 120 125

Glu His Ser Ser Leu Gly His Ala Asp Leu Asp Ala Leu Gln Gln Asn
130 135 140

Pro Gln Pro Leu Ile Phe His Ile Glu Met Leu Lys Val Glu Ser Pro
145 150 155 160

Gly Thr Tyr Gln Gln Asp Pro Trp Ala Met Thr Asp Glu Glu Lys Ala
165 170 175

Lys Ala Val Pro Val Ile His Gln Glu Gly Asn Arg Leu Tyr Arg Glu
180 185 190

Gly Gln Val Lys Glu Ala Ala Lys Tyr Tyr Asp Ala Ile Ala Cys
195 200 205

Leu Lys Asn Leu Gln Met Lys Glu Gln Pro Gly Ser Pro Asp Trp Ile
210 215 220

Gln Leu Asp Leu Gln Ile Thr Pro Leu Leu Leu Asn Tyr Cys Gln Cys
225 230 235 240

Lys Leu Val Ala Gln Glu Tyr Tyr Glu Val Leu Asp His Cys Ser Ser
245 250 255

Ile Leu Asn Lys Tyr Asp Asp Asn Val Lys Ala Tyr Phe Lys Arg Gly
260 265 270

VOS0068 SEQUENCE LISTING-2_ST25

Lys Ala His Ala Ala Val Trp Asn Ala Gln Glu Ala Gln Ala Asp Phe
275 280 285

Ala Lys Val Leu Glu Leu Asp Pro Ala Leu Ala Pro Val Val Ser Arg
290 295 300

Glu Leu Arg Ala Leu Glu Thr Arg Ile Arg Gln Lys Asp Glu Glu Asp
305 310 315 320

Lys Ala Arg Phe Arg Gly Ile Phe Ser His
325 330

<210> 15
<211> 384
<212> PRT
<213> Homo sapiens

<400> 15

Met Asp Ala Ala Leu Leu Leu Asn Val Glu Gly Val Lys Lys Thr Ile
1 5 10 15

Leu His Gly Gly Thr Gly Glu Leu Pro Asn Phe Ile Thr Gly Ser Arg
20 25 30

Val Ile Phe His Phe Arg Thr Met Lys Cys Asp Glu Glu Arg Thr Val
35 40 45

Ile Asp Asp Ser Arg Gln Val Gly Gln Pro Met His Ile Ile Ile Gly
50 55 60

Asn Met Phe Lys Leu Glu Val Trp Glu Ile Leu Leu Thr Ser Met Arg
65 70 75 80

Val His Glu Val Ala Glu Phe Trp Cys Asp Thr Ile His Thr Gly Val
85 90 95

Tyr Pro Ile Leu Ser Arg Ser Leu Arg Gln Met Ala Gln Gly Lys Asp
100 105 110

Pro Thr Glu Trp His Val His Thr Cys Gly Leu Ala Asn Met Phe Ala
115 120 125

Tyr His Thr Leu Gly Tyr Glu Asp Leu Asp Glu Leu Gln Lys Glu Pro
130 135 140

Gln Pro Leu Val Phe Val Ile Glu Leu Leu Gln Val Asp Ala Pro Ser
145 150 155 160

VOS0068 SEQUENCE LISTING-2_ST25

Asp Tyr Gln Arg Glu Thr Trp Asn Leu Ser Asn His Glu Lys Met Lys
165 170 175

Ala Val Pro Val Leu His Gly Glu Gly Asn Arg Leu Phe Lys Leu Gly
180 185 190

Arg Tyr Glu Glu Ala Ser Ser Lys Tyr Gln Glu Ala Ile Ile Cys Leu
195 200 205

Arg Asn Leu Gln Thr Lys Glu Lys Pro Trp Glu Val Gln Trp Leu Lys
210 215 220

Leu Glu Lys Met Ile Asn Thr Leu Ile Leu Asn Tyr Cys Gln Cys Leu
225 230 235 240

Leu Lys Lys Glu Glu Tyr Tyr Glu Val Leu Glu His Thr Ser Asp Ile
245 250 255

Leu Arg His His Pro Gly Ile Val Lys Ala Tyr Tyr Val Arg Ala Arg
260 265 270

Ala His Ala Glu Val Trp Asn Glu Ala Glu Ala Lys Ala Asp Leu Gln
275 280 285

Lys Val Leu Glu Leu Glu Pro Ser Met Gln Lys Ala Val Arg Arg Glu
290 295 300

Leu Arg Leu Leu Glu Asn Arg Met Ala Glu Lys Gln Glu Glu Glu Arg
305 310 315 320

Leu Arg Cys Arg Asn Met Leu Ser Gln Gly Ala Thr Gln Pro Pro Ala
325 330 335

Glu Pro Pro Thr Glu Pro Pro Ala Gln Ser Ser Thr Glu Pro Pro Ala
340 345 350

Glu Pro Pro Thr Ala Pro Ser Ala Glu Leu Ser Ala Gly Pro Pro Ala
355 360 365

Glu Pro Ala Thr Glu Pro Pro Pro Ser Pro Gly His Ser Leu Gln His
370 375 380

<210> 16

<211> 328

<212> PRT

<213> Rattus norvegicus

<400> 16

VOS0068 SEQUENCE LISTING-2_ST25

Met Asp Val Ser Leu Leu Leu Asn Val Glu Gly Val Lys Lys Thr Ile
1 5 10 15

Leu His Gly Gly Thr Gly Glu Leu Pro Asn Phe Ile Thr Gly Ser Arg
20 25 30

Val Thr Phe His Phe Arg Thr Met Lys Cys Asp Glu Glu Arg Thr Val
35 40 45

Ile Asp Asp Ser Lys Gln Val Gly Gln Pro Met Asn Ile Ile Ile Gly
50 55 60

Asn Met Phe Lys Leu Glu Val Trp Glu Thr Leu Leu Thr Ser Met Arg
65 70 75 80

Leu Gly Glu Val Ala Glu Phe Trp Cys Asp Thr Ile His Thr Gly Val
85 90 95

Tyr Pro Met Leu Ser Arg Ser Leu Arg Gln Val Ala Glu Gly Lys Asp
100 105 110

Pro Thr Ser Trp His Val His Thr Cys Gly Leu Ala Asn Met Phe Ala
115 120 125

Tyr His Thr Leu Gly Tyr Glu Asp Leu Asp Glu Leu Gln Lys Glu Pro
130 135 140

Gln Pro Leu Ile Phe Leu Ile Glu Leu Leu Gln Val Glu Ala Pro Asn
145 150 155 160

Glu Tyr Gln Arg Glu Thr Trp Asn Leu Asn Asn Glu Glu Arg Met Gln
165 170 175

Ala Val Pro Leu Leu His Gly Glu Gly Asn Arg Leu Tyr Lys Leu Gly
180 185 190

Arg Tyr Asp Gln Ala Ala Thr Lys Tyr Gln Glu Ala Ile Val Cys Leu
195 200 205

Arg Asn Leu Gln Thr Lys Glu Lys Pro Trp Glu Val Glu Trp Leu Lys
210 215 220

Leu Glu Lys Met Ile Asn Thr Leu Ile Leu Asn Tyr Cys Gln Cys Leu
225 230 235 240

Leu Lys Lys Glu Glu Tyr Tyr Glu Val Leu Glu His Thr Ser Asp Ile
245 250 255

VOS0068 SEQUENCE LISTING-2_ST25

Leu Arg His His Pro Gly Ile Val Lys Ala Tyr Tyr Met Arg Ala Arg
260 265 270

Ala His Ala Glu Val Trp Asn Ala Glu Glu Ala Lys Ala Asp Leu Glu
275 280 285

Lys Val Leu Glu Leu Glu Pro Ser Met Arg Lys Ala Val Leu Arg Glu
290 295 300

Leu Arg Leu Leu Glu Ser Arg Leu Ala Asp Lys Gln Glu Glu Glu Arg
305 310 315 320

Gln Arg Cys Arg Ser Met Leu Gly
325

<210> 17
<211> 328
<212> PRT
<213> Mus musculus

<400> 17

Met Asp Val Ser Leu Leu Leu Asn Val Glu Gly Val Lys Lys Thr Ile
1 5 10 15

Leu His Gly Gly Thr Gly Glu Leu Pro Asn Phe Ile Thr Gly Ser Arg
20 25 30

Val Thr Phe His Phe Arg Thr Met Lys Cys Asp Glu Glu Arg Thr Val
35 40 45

Ile Asp Asp Ser Lys Gln Val Gly Gln Pro Met Ser Ile Ile Ile Gly
50 55 60

Asn Met Phe Lys Leu Glu Val Trp Glu Thr Leu Leu Thr Ser Met Arg
65 70 75 80

Leu Gly Glu Val Ala Glu Phe Trp Cys Asp Thr Ile His Thr Gly Val
85 90 95

Tyr Pro Met Leu Ser Arg Ser Leu Arg Gln Val Ala Glu Gly Lys Asp
100 105 110

Pro Thr Ser Trp His Val His Thr Cys Gly Leu Ala Asn Met Phe Ala
115 120 125

Tyr His Thr Leu Gly Tyr Glu Asp Leu Asp Glu Leu Gln Lys Glu Pro
130 135 140

VOS0068 SEQUENCE LISTING-2_ST25

Gln Pro Leu Val Phe Leu Tyr Glu Leu Gln Val Glu Ala Pro Asn
145 150 155 160

Glu Tyr Gln Arg Glu Thr Trp Asn Leu Asn Glu Glu Arg Met Gln
165 170 175

Ala Val Pro Leu Leu His Gly Glu Gly Asn Arg Leu Tyr Lys Leu Gly
180 185 190

Arg Tyr Asp Gln Ala Ala Thr Lys Tyr Gln Glu Ala Ile Val Cys Leu
195 200 205

Arg Asn Leu Gln Thr Lys Glu Lys Pro Trp Glu Val Glu Trp Leu Lys
210 215 220

Leu Glu Lys Met Ile Asn Thr Leu Ile Leu Asn Tyr Cys Gln Cys Leu
225 230 235 240

Leu Lys Lys Glu Glu Tyr Tyr Glu Val Leu Glu His Thr Ser Asp Ile
245 250 255

Leu Arg His His Pro Gly Ile Val Lys Ala Tyr Tyr Met Arg Ala Arg
260 265 270

Ala His Ala Glu Val Trp Asn Ala Glu Glu Ala Lys Ala Asp Leu Glu
275 280 285

Lys Val Leu Glu Leu Glu Pro Ser Met Arg Lys Ala Val Leu Arg Glu
290 295 300

Leu Arg Leu Leu Glu Ser Arg Leu Ala Asp Lys Gln Glu Glu Glu Arg
305 310 315 320

Gln Arg Cys Arg Ser Met Leu Gly
325

<210> 18
<211> 402
<212> PRT
<213> Mus musculus

<400> 18

Met Ala Ser Trp Ala Glu Pro Ser Glu Pro Ala Ala Leu Arg Leu Pro
1 5 10 15

Gly Ala Pro Leu Leu Glu Gly Phe Glu Val Leu Asp Gly Val Asp Asp
20 25 30

VOS0068 SEQUENCE LISTING-2_ST25

Ala Glu Glu Glu Asp Asp Leu Ser Gly Leu Pro Pro Leu Glu Asp Met
35 40 45

Gly Gln Pro Thr Val Glu Glu Ala Glu Gln Pro Gly Ala Leu Ala Arg
50 55 60

Glu Phe Leu Ala Ala Thr Glu Pro Glu Pro Ala Pro Ala Pro Ala Pro
65 70 75 80

Glu Glu Trp Leu Asp Ile Leu Gly Asn Gly Leu Leu Arg Met Lys Thr
85 90 95

Leu Val Pro Gly Pro Lys Gly Ser Ser Arg Pro Leu Lys Gly Gln Val
100 105 110

Val Thr Val His Leu Gln Met Ser Leu Glu Asn Gly Thr Arg Val Gln
115 120 125

Glu Glu Pro Glu Leu Ala Phe Thr Leu Gly Asp Cys Asp Val Ile Gln
130 135 140

Ala Leu Asp Leu Ser Val Pro Leu Met Asp Val Gly Glu Thr Ala Met
145 150 155 160

Val Thr Ala Asp Ser Lys Tyr Cys Tyr Gly Pro Gln Gly Arg Ser Pro
165 170 175

Tyr Ile Pro Pro His Ala Ala Leu Cys Leu Glu Val Thr Leu Lys Thr
180 185 190

Ala Glu Asp Gly Pro Asp Leu Glu Met Leu Ser Gly Gln Glu Arg Val
195 200 205

Ala Leu Ala Asn Arg Lys Arg Glu Cys Gly Asn Ala His Tyr Gln Arg
210 215 220

Ala Asp Phe Val Leu Ala Ala Asn Ser Tyr Asp Leu Ala Ile Lys Ala
225 230 235 240

Ile Thr Ser Asn Thr Lys Val Asp Met Thr Cys Glu Glu Glu Glu
245 250 255

Leu Leu Gln Leu Lys Val Lys Cys Leu Asn Asn Leu Ala Ala Ser Gln
260 265 270

Leu Lys Leu Asp His Tyr Arg Ala Ala Leu Arg Ser Cys Ser Gln Val
24

V050068 SEQUENCE LISTING-2_ST25
280 285

275

Leu Glu His Gln Pro Asp Asn Ile Lys Ala Leu Phe Arg Lys Gly Lys
290 295 300

Val Leu Ala Gln Gln Gly Glu Tyr Ser Glu Ala Ile Pro Ile Leu Arg
305 310 315 320

Ala Ala Leu Lys Leu Glu Pro Ser Asn Lys Thr Ile His Ala Glu Leu
325 330 335

Ser Lys Leu Val Lys Lys Arg Ala Ala Gln Arg Ser Thr Glu Thr Ala
340 345 350

Leu Tyr Arg Lys Met Leu Gly Asn Pro Ser Arg Leu Pro Ala Lys Cys
355 360 365

Pro Gly Lys Gly Ala Trp Ser Ile Pro Trp Lys Trp Leu Phe Gly Ala
370 375 380

Thr Ala Val Ala Leu Gly Gly Val Ala Leu Ser Val Val Ile Ala Ala
385 390 395 400

Arg Asn

<210> 19
<211> 456
<212> PRT
<213> Mus musculus

<400> 19

Met Thr Thr Asp Glu Gly Thr Ser Asn Asn Gly Glu Asn Pro Ala Ala
1 5 10 15

Thr Met Thr Glu Gln Gly Glu Asp Ile Thr Thr Lys Lys Asp Arg Gly
20 25 30

Val Leu Lys Ile Val Lys Arg Val Gly Thr Ser Asp Glu Ala Pro Met
35 40 45

Phe Gly Asp Lys Val Tyr Val His Tyr Lys Gly Met Leu Ser Asp Gly
50 55 60

Lys Lys Phe Asp Ser Ser His Asp Arg Lys Lys Pro Phe Ala Phe Ser
65 70 75 80

Leu Gly Gln Gly Gln Val Ile Lys Ala Trp Asp Ile Gly Val Ser Thr
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VOS0068 SEQUENCE LISTING-2_ST25

85

90

95

Met Lys Lys Gly Glu Ile Cys His Leu Leu Cys Lys Pro Glu Tyr Ala
 100 105 110
 Tyr Gly Ser Ala Gly His Leu Gln Lys Ile Pro Ser Asn Ala Thr Leu
 115 120 125
 Phe Phe Glu Ile Glu Leu Leu Asp Phe Lys Gly Glu Asp Leu Phe Glu
 130 135 140
 Asp Ser Gly Val Ile Arg Arg Ile Lys Arg Lys Gly Glu Gly Tyr Ser
 145 150 155 160
 Asn Pro Asn Glu Gly Ala Thr Val Lys Val His Leu Glu Gly Cys Cys
 165 170 175
 Gly Gly Arg Thr Phe Asp Cys Arg Asp Val Val Phe Val Val Gly Glu
 180 185 190
 Gly Glu Asp His Asp Ile Pro Ile Gly Ile Asp Lys Ala Leu Val Lys
 195 200 205
 Met Gln Arg Glu Glu Gln Cys Ile Leu Tyr Leu Gly Pro Arg Tyr Gly
 210 215 220
 Phe Gly Glu Ala Gly Lys Pro Lys Phe Gly Ile Asp Pro Asn Ala Glu
 225 230 235 240
 Leu Met Tyr Glu Val Thr Leu Lys Ser Phe Glu Lys Ala Lys Glu Ser
 245 250 255
 Trp Glu Met Asp Thr Lys Glu Lys Leu Thr Gln Ala Ala Ile Val Lys
 260 265 270
 Glu Lys Gly Thr Val Tyr Phe Lys Gly Gly Lys Tyr Thr Gln Ala Val
 275 280 285
 Ile Gln Tyr Arg Lys Ile Val Ser Trp Leu Glu Met Glu Tyr Gly Leu
 290 295 300
 Ser Glu Lys Glu Ser Lys Ala Ser Glu Ser Phe Leu Leu Ala Ala Phe
 305 310 315 320
 Leu Asn Leu Ala Met Cys Tyr Leu Lys Leu Arg Glu Tyr Asn Lys Ala
 325 330 335

VOS0068 SEQUENCE LISTING-2_ST25

Val Glu Cys Asp Lys Ala Leu Gly Leu Asp Ser Ala Asn Glu Lys
340 345 350

Gly Leu Tyr Arg Arg Gly Glu Ala Gln Leu Leu Met Asn Asp Phe Glu
355 360 365

Ser Ala Lys Gly Asp Phe Glu Lys Val Leu Ala Val Asn Pro Gln Asn
370 375 380

Arg Ala Ala Arg Leu Gln Ile Ser Met Cys Gln Arg Lys Ala Lys Glu
385 390 395 400

His Asn Glu Arg Asp Arg Arg Val Tyr Ala Asn Met Phe Lys Lys Phe
405 410 415

Ala Glu Arg Asp Ala Lys Glu Glu Ala Ser Lys Ala Gly Ser Lys Lys
420 425 430

Ala Val Glu Gly Ala Ala Gly Lys Gln His Glu Ser Gln Ala Met Glu
435 440 445

Glu Gly Lys Ala Lys Gly His Val
450 455

<210> 20
<211> 458
<212> PRT
<213> Mus musculus

<400> 20

Met Thr Ala Glu Glu Met Lys Ala Ala Glu Asn Gly Ala Gln Ser Ala
1 5 10 15

Pro Leu Pro Leu Glu Gly Val Asp Ile Ser Pro Lys Gln Asp Glu Gly
20 25 30

Val Leu Lys Val Ile Lys Arg Glu Gly Thr Gly Thr Glu Thr Pro Met
35 40 45

Ile Gly Asp Arg Val Phe Val His Tyr Thr Gly Trp Leu Leu Asp Gly
50 55 60

Thr Lys Phe Asp Ser Ser Leu Asp Arg Lys Asp Lys Phe Ser Phe Asp
65 70 75 80

Leu Gly Lys Gly Glu Val Ile Lys Ala Trp Asp Ile Ala Val Ala Thr
85 90 95

VOS0068 SEQUENCE LISTING-2_ST25

Met Lys Val Gly Glu Val Cys His Ile Thr Cys Lys Pro Glu Tyr Ala
 100 105 110
 Tyr Gly Ala Ala Gly Ser Pro Pro Lys Ile Pro Pro Asn Ala Thr Leu
 115 120 125
 Val Phe Glu Val Glu Leu Phe Glu Phe Lys Gly Glu Asp Leu Thr Glu
 130 135 140
 Glu Glu Asp Gly Gly Ile Ile Arg Arg Ile Arg Thr Arg Gly Glu Gly
 145 150 155 160
 Tyr Ala Arg Pro Asn Asp Gly Ala Met Val Glu Val Ala Leu Glu Gly
 165 170 175
 Tyr His Lys Asp Arg Leu Phe Asp Gln Arg Glu Leu Cys Phe Glu Val
 180 185 190
 Gly Glu Gly Glu Ser Leu Asp Leu Pro Cys Gly Leu Glu Glu Ala Ile
 195 200 205
 Gln Arg Met Glu Lys Gly Glu His Ser Ile Val Tyr Leu Lys Pro Ser
 210 215 220
 Tyr Ala Phe Gly Ser Val Gly Lys Glu Arg Phe Gln Ile Pro Pro His
 225 230 235 240
 Ala Glu Leu Arg Tyr Glu Val Arg Leu Lys Ser Phe Glu Lys Ala Lys
 245 250 255
 Glu Ser Trp Glu Met Ser Ser Ala Glu Lys Leu Glu Gln Ser Asn Ile
 260 265 270
 Val Lys Glu Arg Gly Thr Ala Tyr Phe Lys Glu Gly Lys Tyr Lys Gln
 275 280 285
 Ala Leu Leu Gln Tyr Lys Lys Ile Val Ser Trp Leu Glu Tyr Glu Ser
 290 295 300
 Ser Phe Ser Gly Glu Glu Met Gln Lys Val His Ala Leu Arg Leu Ala
 305 310 315 320
 Ser His Leu Asn Leu Ala Met Cys His Leu Lys Leu Gln Ala Phe Ser
 325 330 335
 Ala Ala Ile Glu Ser Cys Asn Lys Ala Leu Glu Leu Asp Ser Asn Asn
 340 345 350

VOS0068 SEQUENCE LISTING-2_ST25

Glu Lys Gly Leu Phe Arg Arg Gly Glu Ala His Leu Ala Val Asn Asp
355 360 365

Phe Asp Leu Ala Arg Ala Asp Phe Gln Lys Val Leu Gln Leu Tyr Pro
370 375 380

Ser Asn Lys Ala Ala Lys Thr Gln Leu Ala Val Cys Gln Gln Arg Thr
385 390 395 400

Arg Arg Gln Leu Ala Arg Glu Lys Lys Leu Tyr Ala Asn Met Phe Glu
405 410 415

Arg Leu Ala Glu Glu Glu His Lys Val Lys Ala Glu Val Ala Ala Gly
420 425 430

Asp His Pro Thr Asp Ala Glu Met Lys Gly Glu Arg Asn Asn Val Ala
435 440 445

Glu Asn Gln Ser Arg Val Glu Thr Glu Ala
450 455

<210> 21

<211> 458

<212> PRT

<213> Oryctolagus cuniculus

<400> 21

Met Thr Ala Glu Glu Met Lys Ala Ala Glu Ser Gly Ala Gln Ser Ala
1 5 10 15

Pro Leu Pro Leu Glu Gly Val Asp Ile Ser Pro Lys Gln Asp Glu Gly
20 25 30

Val Leu Lys Val Ile Lys Arg Glu Gly Thr Gly Thr Glu Thr Pro Met
35 40 45

Ile Gly Asp Arg Val Phe Val His Tyr Thr Gly Trp Leu Leu Asp Gly
50 55 60

Thr Lys Phe Asp Ser Ser Leu Asp Arg Lys Asp Lys Phe Ser Phe Asp
65 70 75 80

Leu Gly Lys Gly Glu Val Ile Lys Ala Trp Asp Ile Ala Val Ala Thr
85 90 95

Met Lys Val Gly Glu Leu Cys Arg Ile Thr Cys Lys Pro Glu Tyr Ala
100 105 110

VOS0068 SEQUENCE LISTING-2_ST25

Tyr Gly Ser Ala Gly Ser Pro Pro Lys Ile Pro Pro Asn Ala Thr Leu
 115 120 125
 Val Phe Glu Val Glu Leu Phe Glu Phe Lys Gly Glu Asp Leu Thr Asp
 130 135 140
 Asp Glu Asp Gly Gly Ile Ile Arg Arg Ile Arg Thr Arg Gly Glu Gly
 145 150 155 160
 Tyr Ala Arg Pro Asn Asp Gly Ala Ile Val Glu Val Ala Leu Glu Gly
 165 170 175
 Tyr Tyr Lys Asp Arg Leu Phe Asp Gln Arg Glu Leu Arg Phe Glu Val
 180 185 190
 Gly Glu Gly Glu Ser Leu Asp Leu Pro Cys Gly Leu Glu Lys Ala Ile
 195 200 205
 Gln Arg Met Glu Lys Gly Glu His Ser Ile Leu Tyr Leu Lys Pro Ser
 210 215 220
 Tyr Ala Phe Gly Asn Ala Gly Lys Glu Lys Phe Gln Ile Pro Pro Tyr
 225 230 235 240
 Ala Glu Leu Lys Tyr Glu Val His Leu Lys Ser Phe Glu Lys Ala Lys
 245 250 255
 Glu Ser Trp Glu Met Ser Ser Glu Glu Lys Leu Glu Gln Ser Ala Ile
 260 265 270
 Val Lys Glu Arg Gly Thr Val Tyr Phe Lys Glu Gly Lys Tyr Lys Gln
 275 280 285
 Ala Leu Leu Gln Tyr Lys Lys Ile Val Ser Trp Leu Glu Tyr Glu Ser
 290 295 300
 Ser Phe Ser Ser Glu Glu Val Gln Lys Ala Gln Ala Leu Arg Leu Ala
 305 310 315 320
 Ser His Leu Asn Leu Ala Met Cys His Leu Lys Leu Gln Ala Phe Ser
 325 330 335
 Ala Ala Val Glu Ser Cys Asn Lys Ala Leu Glu Leu Asp Ser Asn Asn
 340 345 350
 Glu Lys Gly Leu Phe Arg Arg Gly Glu Ala His Leu Ala Val Asn Asp
 355 360 365

VOS0068 SEQUENCE LISTING-2_ST25

Phe Asp Leu Ala Arg Ala Asp Phe Gln Lys Val Leu Gln Leu Tyr Pro
370 375 380

Ser Asn Lys Ala Ala Lys Ala Gln Leu Ala Val Cys Gln Gln Arg Ile
385 390 395 400

Arg Lys Gln Ile Ala Arg Glu Lys Lys Leu Tyr Ala Asn Met Phe Glu
405 410 415

Arg Leu Ala Glu Glu Glu Asn Lys Ala Lys Ala Glu Val Ala Ala Gly
420 425 430

Asp His Pro Met Asp Thr Glu Met Lys Asp Glu Arg Asn Asp Val Ala
435 440 445

Gly Ser Gln Ser Gln Val Glu Thr Glu Ala
450 455

<210> 22
<211> 559
<212> PRT
<213> Triticum aestivum

<220>
<221> misc_feature
<222> (284)..(284)
<223> xaa can be any naturally occurring amino acid

<400> 22

Met Asp Asp Asp Phe Asp Ile Pro Ala Gly Asp Asp Met Met Met Gly
1 5 10 15

Asp Gly Met Gly Asp Phe Gly Gly Ala Glu Gly Pro Gly Met Lys Val
20 25 30

Gly Glu Glu Asn Glu Ile Gly Lys Gln Gly Leu Lys Lys Lys Leu Leu
35 40 45

Lys Glu Gly Glu Gly Trp Asp Thr Pro Glu Val Gly Asp Glu Val Glu
50 55 60

Val His Tyr Thr Gly Thr Leu Leu Asp Gly Lys Lys Phe Asp Ser Ser
65 70 75 80

Arg Asp Arg Asp Asp Thr Phe Lys Phe Lys Leu Gly Gln Gly Gln Val
85 90 95

VOS0068 SEQUENCE LISTING-2_ST25

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Ile Lys Gly Trp Asp Gln Gly Ile Lys Thr Met Lys Lys Gly Glu Asn
100                               105                110

Ala Leu Phe Thr Ile Pro Pro Glu Leu Ala Tyr Gly Glu Ser Gly Ser
115                               120                125

Pro Pro Thr Ile Pro Ala Asn Ala Thr Leu Gln Phe Asp Val Glu Leu
130                               135                140

Leu Ser Trp Thr Ser Val Arg Asp Ile Ala Lys Asp Gly Gly Ile Phe
145                               150                155                160

Lys Lys Ile Leu Lys Glu Gly Asp Lys Trp Glu Asn Pro Lys Asp Pro
165                               170                175

Asp Glu Val Phe Val Lys Tyr Glu Ala Arg Leu Glu Asp Gly Thr Val
180                               185                190

Val Ser Lys Ser Glu Gly Val Glu Phe Thr Val Lys Asp Gly His Leu
195                               200                205

Cys Pro Ala Leu Ala Lys Ala Val Lys Thr Met Lys Lys Gly Glu Lys
210                               215                220

Val Leu Leu Ala Val Lys Pro Gln Tyr Gly Phe Gly Glu Met Gly Arg
225                               230                235                240

Pro Ala Ala Gly Glu Gly Gly Ala Val Pro Pro Asn Ala Ser Leu Val
245                               250                255

Ile Asp Leu Glu Leu Val Ser Trp Lys Thr Val Thr Glu Ile Gly Asp
260                               265                270

Asp Lys Lys Ile Leu Lys Lys Val Leu Lys Glu Xaa Glu Gly Tyr Glu
275                               280                285

Arg Pro Asn Glu Gly Ala Val Val Thr Val Lys Ile Thr Gly Lys Leu
290                               295                300

Gln Asp Gly Thr Val Phe Leu Lys Lys Gly His Asp Glu Gln Glu Pro
305                               310                315                320

Phe Glu Phe Lys Thr Asp Glu Glu Ala Val Ile Glu Gly Leu Asp Arg
325                               330                335

Ala Val Leu Asn Met Lys Lys Gly Glu Val Ala Leu Val Thr Ile Pro
340                               345                350

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VOS0068 SEQUENCE LISTING-2_ST25

Pro Glu Tyr Ala Tyr Gly Ser Thr Glu Ser Lys Gln Asp Ala Ile Val
355 360 365

Pro Pro Asn Ser Thr Val Ile Tyr Glu Val Glu Leu Val Ser Phe Val
370 375 380

Lys Asp Lys Glu Ser Trp Asp Leu Asn Asn Ser Glu Lys Ile Glu Ala
385 390 395 400

Ala Gly Thr Lys Lys Glu Glu Gly Asn Ala Leu Phe Lys Ser Gly Lys
405 410 415

Tyr Ala Arg Ala Ser Lys Arg Tyr Glu Lys Ala Ala Lys Phe Ile Glu
420 425 430

Tyr Asp Thr Ser Phe Ser Glu Asp Glu Lys Lys Gln Ser Lys Gln Leu
435 440 445

Lys Ile Thr Cys Asn Leu Asn Asn Ala Ala Cys Lys Leu Lys Leu Lys
450 455 460

Asp Tyr Lys Gln Ala Glu Lys Leu Cys Thr Lys Val Leu Glu Leu Asp
465 470 475 480

Ser Arg Asn Val Lys Ala Leu Tyr Arg Arg Ala Gln Ala Tyr Thr Gln
485 490 495

Leu Ala Asp Leu Glu Leu Ala Glu Val Asp Ile Lys Lys Ala Leu Glu
500 505 510

Ile Asp Pro Glu Asn Arg Asp Val Lys Leu Thr Tyr Lys Thr Leu Lys
515 520 525

Glu Lys Ile Lys Glu Ile Asn Lys Lys Asp Ala Lys Phe Tyr Ser Asn
530 535 540

Met Phe Ser Lys Met Thr Lys Pro Ser Ala Glu Glu Ser Lys Ala
545 550 555

<210> 23
<211> 370
<212> PRT
<213> Bos taurus

<400> 23

Met Ser His Pro Ser Pro Gln Ala Lys Pro Ser Asn Pro Ser Asn Pro
1 5 10 15

VOS0068 SEQUENCE LISTING-2_ST25

Arg Val Phe Phe Asp Val Asp Ile Gly Gly Glu Arg Val Gly Arg Ile
20 25 30

Val Leu Glu Leu Phe Ala Asp Ile Val Pro Lys Thr Ala Glu Asn Phe
35 40 45

Arg Ala Leu Cys Thr Gly Glu Lys Gly Ile Gly Pro Thr Thr Gly Lys
50 55 60

Pro Leu His Phe Lys Gly Cys Pro Phe His Arg Ile Ile Lys Lys Phe
65 70 75 80

Met Ile Gln Gly Gly Asp Phe Ser Asn Gln Asn Gly Thr Gly Gly Glu
85 90 95

Ser Ile Tyr Gly Glu Lys Phe Glu Asp Glu Asn Phe His Tyr Lys His
100 105 110

Asp Lys Glu Gly Leu Leu Ser Met Ala Asn Ala Gly Ser Asn Thr Asn
115 120 125

Gly Ser Gln Phe Phe Ile Thr Thr Val Pro Thr Pro His Leu Asp Gly
130 135 140

Lys His Val Val Phe Gly Gln Val Ile Lys Gly Met Gly Val Ala Lys
145 150 155 160

Ile Leu Glu Asn Val Glu Val Lys Gly Glu Lys Pro Ala Lys Leu Cys
165 170 175

Val Ile Ala Glu Cys Gly Glu Leu Lys Glu Gly Asp Asp Trp Gly Ile
180 185 190

Phe Pro Lys Asp Gly Ser Gly Asp Ser His Pro Asp Phe Pro Glu Asp
195 200 205

Ala Asp Val Asp Leu Lys Asp Val Asp Lys Ile Leu Leu Ile Ser Glu
210 215 220

Asp Leu Lys Asn Ile Gly Asn Thr Phe Phe Lys Ser Gln Asn Trp Glu
225 230 235 240

Met Ala Ile Lys Lys Tyr Thr Lys Val Leu Arg Tyr Val Glu Gly Ser
245 250 255

Arg Ala Ala Ala Glu Asp Ala Asp Gly Ala Lys Leu Gln Pro Val Ala
260 265 270

VOS0068 SEQUENCE LISTING-2_ST25

Leu Ser Cys Val Leu Asn Ile Gly Ala Cys Lys Leu Lys Met Ser Asp
275 280

Trp Gln Gly Ala Val Asp Ser Cys Leu Glu Ala Leu Glu Ile Asp Pro
290 295 300

Ser Asn Thr Lys Ala Leu Tyr Arg Arg Ala Gln Gly Trp Gln Gly Leu
305 310 315 320

Lys Glu Tyr Asp Gln Ala Leu Ala Asp Leu Lys Lys Ala Gln Glu Ile
325 330 335

Ala Pro Glu Asp Lys Ala Ile Gln Ala Glu Leu Leu Lys Val Lys Gln
340 345 350

Lys Ile Lys Ala Gln Lys Asp Lys Glu Lys Ala Ala Tyr Ala Lys Met
355 360 365

Phe Ala
370

<210> 24

<211> 149

<212> PRT

<213> Achlya klebsiana

<400> 24

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Gly Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Val Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Leu Glu Ala Phe Gln Gly Phe Asp Lys Asp
85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Met Met Thr Asn
100 105 110

VOS0068 SEQUENCE LISTING-2_ST25

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Met Met Met Ser Lys
145

<210> 25
<211> 149
<212> PRT
<213> Blastocladia emersonii

<400> 25

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Leu Val Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Ser
65 70 75 80

Asp Ser Glu Glu Glu Ile Lys Glu Ala Phe Lys Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Tyr Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Ser Glu Asp Glu Val Glu Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Met Met Met Ser Lys
145

<210> 26
<211> 149

VOS0068 SEQUENCE LISTING-2_ST25

<212> PRT
<213> *Candida albicans*

<400> 26

Met Ala Glu Lys Leu Ser Glu Gln Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Ser Asp Gly Lys Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Ser Glu Ser Glu
35 40 45

Leu Thr Asp Met Ile Asn Glu Val Asp Val Asn Ser Asp Gly Ser Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Ala Glu Ile Ala Glu Ala Phe Lys Val Phe Asp Arg Asn
85 90 95

Gly Asp Gly Lys Ile Ser Ala Ala Glu Leu Arg His Leu Leu Thr Ser
100 105 110

Ile Gly Glu Lys Leu Ser Asp Ala Asp Val Asp Gln Met Ile Lys Glu
115 120 125

Ala Asp Thr Asn Asn Asp Gly Glu Ile Asp Ile Gln Glu Phe Thr Ser
130 135 140

Leu Leu Ala Ala Lys
145

<210> 27
<211> 149
<212> PRT
<213> *Capsicum annuum*, *Brassica oleracea*, *Nicotiana tabacum*

<400> 27

Met Ala Asp Gln Leu Thr Asp Asp Gln Ile Ser Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

VOS0068 SEQUENCE LISTING-2_ST25

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Asp Glu Phe Val Lys
130 135 140

Val Met Met Ala Lys
145

<210> 28

<211> 163

<212> PRT

<213> Chlamydomonas reinhardtii

<400> 28

Met Ala Ala Asn Thr Glu Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe
1 5 10 15

Lys Glu Ala Phe Ala Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr
20 25 30

Thr Lys Glu Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr
35 40 45

Glu Ala Glu Leu Gln Asp Met Ile Ser Glu Val Asp Ala Asp Gly Asn
50 55 60

Gly Thr Ile Asp Phe Pro Glu Phe Leu Met Leu Met Ala Arg Lys Met
65 70 75 80

Lys Glu Thr Asp His Glu Asp Glu Leu Arg Glu Ala Phe Lys Val Phe
85 90 95

Asp Lys Asp Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val
100 105 110

VOS0068 SEQUENCE LISTING-2_ST25

Met Thr Asn Leu Gly Glu Lys Leu Ser Glu Glu Glu Val Asp Glu Met
115 120 125

Ile Arg Glu Ala Asp Val Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu
130 135 140

Phe Val Arg Met Met Thr Ser Gly Ala Thr Asp Asp Lys Asp Lys Lys
145 150 155 160

Gly His Lys

<210> 29
<211> 152
<212> PRT
<213> Dictyostelium discoideum

<400> 29

Met Ala Ser Gln Glu Ser Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys
1 5 10 15

Glu Ala Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Ser Ile Thr Thr
20 25 30

Lys Glu Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu
35 40 45

Ala Glu Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly
50 55 60

Asn Ile Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Gln
65 70 75 80

Asp Thr Asp Thr Glu Glu Ile Arg Glu Ala Phe Lys Val Phe Asp
85 90 95

Lys Asp Gly Asn Gly Tyr Ile Ser Ala Ala Glu Leu Arg His Val Met
100 105 110

Thr Ser Leu Gly Glu Lys Leu Thr Asn Glu Glu Val Asp Glu Met Ile
115 120 125

Arg Glu Ala Asp Leu Asp Gly Asp Gly Gln Val Asn Tyr Asp Glu Phe
130 135 140

Val Lys Met Met Ile Val Arg Asn
145 150

VOS0068 SEQUENCE LISTING-2_ST25

<210> 30
 <211> 149
 <212> PRT
 <213> Drosophila melanogaster, Aplysia californica, Strongylocentrotus intermedius, Branchiostoma belcheri tsingtauense

<400> 30

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
 20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
 35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
 50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
 65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
 85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
 100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
 115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Thr
 130 135 140

Met Met Thr Ser Lys
 145

<210> 31
 <211> 149
 <212> PRT
 <213> Electrophorus electricus

<400> 31

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
 20 25 30

VOS0068 SEQUENCE LISTING-2_ST25

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Lys Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Tyr Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Gln
130 135 140

Met Met Thr Ala Lys
145

<210> 32

<211> 149

<212> PRT

<213> Emericella nidulans, Paracoccidioides brasiliensis

<400> 32

Met Ala Asp Ser Leu Thr Glu Glu Gln Val Ser Glu Tyr Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Gln Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Ser Glu Ser Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Asn Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Lys Val Phe Asp Arg Asp
85 90 95

VOS0068 SEQUENCE LISTING-2_ST25

Asn Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Ser
100 105 110

Ile Gly Glu Lys Leu Thr Asp Asp Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Gln Asp Gly Asp Gly Arg Ile Asp Tyr Asn Glu Phe Val Gln
130 135 140

Leu Met Met Gln Lys
145

<210> 33
<211> 149
<212> PRT
<213> Euglena gracilis

<400> 33

Met Ala Asp Gln Leu Thr Glu Asp Gln Ile Ser Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Val Met Met Ala Lys
145

VOS0068 SEQUENCE LISTING-2_ST25

<210> 34
 <211> 148
 <212> PRT
 <213> *Fagus sylvatica*

<400> 34

Met Ala Asp Gln Leu Thr Asp Asp Gln Ile Ser Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
 20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
 35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Arg Asp Gly Asn Gly Thr Ile
 50 55 60

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
 65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
 85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
 100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Val Asp Glu Met Ile Arg Glu Ala
 115 120 125

Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys Val
 130 135 140

Met Met Ala Lys
 145

<210> 35
 <211> 149
 <212> PRT
 <213> *Helianthus annuus*

<400> 35

Met Ala Asp Gln Leu Thr Glu Asp Gln Ile Ser Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
 20 25 30

VOS0068 SEQUENCE LISTING-2_ST25

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Val Met Met Ala Lys
145

<210> 36
<211> 149
<212> PRT
<213> Neurospora crassa, Oryza sativa

<400> 36

Met Ala Asp Gln Leu Thr Asp Asp Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

VOS0068 SEQUENCE LISTING-2_ST25

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Val Met Met Ala Lys
145

<210> 37

<211> 149

<212> PRT

<213> Homo sapiens, Xenopus laevis, Ovis aries, Danio rerio, Bos taurus, Rattus
norvegicus, Perca flavescens, Mus musculus

<400> 37

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Tyr Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Gln
130 135 140

Met Met Thr Ala Lys
145

VOS0068 SEQUENCE LISTING-2_ST25

<210> 38
 <211> 147
 <212> PRT
 <213> Kluyveromyces fragilis

<400> 38

Met Ser Gln Asn Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ala Leu Phe Asp Lys Asp Asn Ser Gly Ser Ile Ser Ala Ser Glu
 20 25 30

Leu Ala Thr Val Met Arg Ser Leu Gly Leu Ser Pro Ser Glu Ala Glu
 35 40 45

Val Ala Asp Leu Met Asn Glu Ile Asp Val Asp Gly Asn His Ala Ile
 50 55 60

Glu Phe Ser Glu Phe Leu Ala Leu Met Ser Arg Gln Leu Lys Cys Asn
 65 70 75 80

Asp Ser Glu Gln Glu Leu Leu Glu Ala Phe Lys Val Phe Asp Lys Asn
 85 90 95

Gly Asp Gly Leu Ile Ser Ala Ala Glu Leu Lys His Val Leu Thr Ser
 100 105 110

Ile Gly Glu Lys Leu Thr Asp Ala Glu Val Asp Glu Met Leu Arg Glu
 115 120 125

Val Ser Asp Gly Ser Gly Glu Ile Asn Ile Lys Gln Phe Ala Ala Leu
 130 135 140

Leu Ser Lys
 145

<210> 39
 <211> 149
 <212> PRT
 <213> Lycopersicon esculentum

<400> 39

Met Ala Glu Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
 20 25 30

VOS0068 SEQUENCE LISTING-2_ST25

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Ser Glu Val Asp Ala Asp Gln Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Lys Val Phe Asp Lys Asp
85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Arg
130 135 140

Met Met Leu Ala Lys
145

<210> 40
<211> 27
<212> PRT
<213> Lytechinus pictus

<400> 40

Lys Lys Met Lys Asp Thr Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe
1 5 10 15

Arg Val Phe Asp Lys Asp Gly Asn Gly Phe Ile
20 25

<210> 41
<211> 149
<212> PRT
<213> Emericella nidulans, Paracoccidioides brasiliensis

<400> 41

Met Ala Asp Ser Leu Thr Glu Glu Gln Val Ser Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Gln Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Ser Glu Ser Glu
Page 47

VOS0068 SEQUENCE LISTING-2_ST25

35

40

45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Asn Asn Gly Thr Ile
 50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
 65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Lys Val Phe Asp Arg Asp
 85 90 95

Asn Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Ser
 100 105 110

Ile Gly Glu Lys Leu Thr Asp Asp Glu Val Asp Glu Met Ile Arg Glu
 115 120 125

Ala Asp Gln Asp Gly Asp Gly Arg Ile Asp Tyr Asn Glu Phe Val Gln
 130 135 140

Leu Met Met Gln Lys
 145

<210> 42

<211> 149

<212> PRT

<213> Zea mays

<400> 42

Met Ala Asp Gln Leu Thr Asp Glu Gln Ile Ala Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
 20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
 35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
 50 55 60

Asp Phe Pro Glu Leu Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
 65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
 85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
 Page 48

VOS0068 SEQUENCE LISTING-2_ST25

100

105

110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Val Met Met Ala Lys
145

<210> 43
<211> 149
<212> PRT
<213> Malus domestica

<400> 43

Met Ala Asp Gln Leu Thr Asp Asp Gln Ile Ser Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Pro Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Val Met Met Ala Lys
145

<210> 44

VOS0068 SEQUENCE LISTING-2_ST25

<211> 149
 <212> PRT
 <213> Medicago sativa, Phaseolus vulgaris, Medicago truncatula, Vigna radiata,
 Glycine max

<400> 44

Met Ala Asp Gln Leu Thr Asp Glu Gln Ile Ser Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
 20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
 35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
 50 55 60

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
 65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
 85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
 100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
 115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
 130 135 140

Val Met Met Ala Lys
 145

<210> 45
 <211> 149
 <212> PRT
 <213> Metridium senile

<400> 45

Met Ala Asp Gln Leu Thr Asp Asp Gln Ile Ser Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
 20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
 Page 50

VOS0068 SEQUENCE LISTING-2_ST25

35

40

45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
 50 55 60

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
 65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
 85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
 100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
 115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Asp Glu Phe Val Lys
 130 135 140

Val Met Met Ala Lys
 145

<210> 46

<211> 149

<212> PRT

<213> Paramecium tetraurelia

<400> 46

Met Ala Glu Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ala Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
 20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
 35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
 50 55 60

Asp Phe Pro Glu Phe Leu Ser Leu Met Ala Arg Lys Met Lys Glu Gln
 65 70 75 80

Asp Ser Glu Glu Glu Leu Ile Glu Ala Phe Lys Val Phe Asp Arg Asp
 85 90 95

Gly Asn Gly Leu Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
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VOS0068 SEQUENCE LISTING-2_ST25

100

105

110

Leu Gly Glu Lys Leu Thr Asp Asp Glu Val Asp Glu Met Ile Arg Glu
 115 120 125

Ala Asp Ile Asp Gly Asp Gly His Ile Asn Tyr Glu Glu Phe Val Arg
 130 135 140

Met Met Val Ser Lys
 145

<210> 47
 <211> 149
 <212> PRT
 <213> Patinopecten sp.

<400> 47

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
 20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
 35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asp Gly Thr Ile
 50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
 65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
 85 90 95

Gly Asp Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
 100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
 115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Thr
 130 135 140

Met Met Thr Ser Lys
 145

<210> 48

VOS0068 SEQUENCE LISTING-2_ST25

<211> 149
 <212> PRT
 <213> Phytophthora infestans, Pythium splendens

<400> 48

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
 20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
 35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
 50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
 65 70 75 80

Asp Ser Glu Glu Glu Ile Leu Glu Ala Phe Lys Val Phe Asp Lys Asp
 85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Ile Met Thr Asn
 100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
 115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
 130 135 140

Met Met Met Ser Lys
 145

<210> 49
 <211> 149
 <212> PRT
 <213> Plasmodium falciparum

<400> 49

Met Ala Asp Lys Leu Thr Glu Glu Gln Ile Ser Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
 20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
 35 40 45

VOS0068 SEQUENCE LISTING-2_ST25

Leu Gln Asp Met Ile Asn Glu Ile Asp Thr Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Leu Met Ala Arg Lys Leu Lys Asp Thr
65 70 75 80

Asp Thr Glu Glu Glu Leu Ile Glu Ala Phe Arg Val Phe Asp Arg Asp
85 90 95

Gly Asp Gly Tyr Ile Ser Ala Asp Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asn Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Met Met Ile Ala Lys
145

<210> 50
<211> 149
<212> PRT
<213> *Pleurotus cornucopiae*

<400> 50

Met Ala Asp Gln Leu Ser Glu Glu Gln Ile Ser Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Arg Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Lys Glu Ala Phe Lys Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Tyr Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

VOS0068 SEQUENCE LISTING-2_ST25

Leu Gly Glu Lys Leu Thr Asp Asn Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Met Met Leu Ser Lys
145

<210> 51
<211> 151
<212> PRT
<213> *Pneumocystis carinii*

<400> 51

Met Ser Asn Glu Gln Asn Leu Thr Glu Glu Gln Ile Ser Glu Phe Lys
1 5 10 15

Glu Ala Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Ser Ile Thr Thr
20 25 30

Lys Glu Leu Gly Ile Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu
35 40 45

Ala Glu Leu Gln Asp Met Val Asn Glu Val Asp Ala Asp Gly Asn Gly
50 55 60

Thr Ile Asp Phe Pro Glu Phe Leu Ala Met Met Ala Arg Lys Met Lys
65 70 75 80

Asp Val Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Lys Val Phe Asp
85 90 95

Lys Asp Gly Asn Gly Ile Ile Ser Ala Ala Glu Leu Arg His Val Met
100 105 110

Thr Asn Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile
115 120 125

Arg Glu Ala Asp Val Asp Gly Asp Gly Val Ile Asp Tyr Ser Glu Phe
130 135 140

Val Lys Met Met Leu Ser Lys
145 150

<210> 52
<211> 149

VOS0068 SEQUENCE LISTING-2_ST25

<212> PRT
<213> Pyuridae sp.

<400> 52

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asp Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Thr
130 135 140

Met Met Thr Ser Lys
145

<210> 53
<211> 150
<212> PRT
<213> Schizosaccharomyces pombe

<400> 53

Met Thr Thr Arg Asn Leu Thr Asp Glu Gln Ile Ala Glu Phe Arg Glu
1 5 10 15

Ala Phe Ser Leu Phe Asp Arg Asp Gln Asp Gly Asn Ile Thr Ser Asn
20 25 30

Glu Leu Gly Val Val Met Arg Ser Leu Gly Gln Ser Pro Thr Ala Ala
35 40 45

VOS0068 SEQUENCE LISTING-2_ST25

Glu Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr
50 55 60

Ile Asp Phe Thr Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp
65 70 75 80

Thr Asp Asn Glu Glu Glu Val Arg Glu Ala Phe Lys Val Phe Asp Lys
85 90 95

Asp Gly Asn Gly Tyr Ile Thr Val Glu Glu Leu Thr His Val Leu Thr
100 105 110

Ser Leu Gly Glu Arg Leu Ser Gln Glu Glu Val Ala Asp Met Ile Arg
115 120 125

Glu Ala Asp Thr Asp Gly Asp Gly Val Ile Asn Tyr Glu Glu Phe Ser
130 135 140

Arg Val Ile Ser Ser Lys
145 150

<210> 54

<211> 149

<212> PRT

<213> Solanum tuberosum

<400> 54

Met Ala Glu Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Ser Glu Ala Asp Ala Asp Gln Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Lys Val Phe Asp Lys Asp
85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

VOS0068 SEQUENCE LISTING-2_ST25

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Arg
130 135 140

Met Met Leu Ala Lys
145

<210> 55
<211> 149
<212> PRT
<213> Spinacia oleracea

<400> 55

Met Ala Glx Glx Leu Thr Asp Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Val Met Met Ala Lys
145

<210> 56
<211> 149
<212> PRT

VOS0068 SEQUENCE LISTING-2_ST25

<213> Stichopus japonicus

<400> 56

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Tyr Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Thr
130 135 140

Met Met Thr Ser Lys
145

<210> 57

<211> 80

<212> PRT

<213> Strongylocentrotus purpuratus

<400> 57

Leu Thr Met Met Ala Arg Lys Met Lys Glu Thr Asp Ser Glu Glu Glu
1 5 10 15

Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp Gly Asn Gly Phe Ile
20 25 30

Ser Ala Ala Glu Leu Arg His Val Met Thr Asn Leu Gly Glu Lys Leu
35 40 45

VOS0068 SEQUENCE LISTING-2_ST25

Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu Ala Asp Ile Asp Gly
50 55 60

Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Ala Met Met Thr Ser Lys
65 70 75 80

<210> 58

<211> 149

<212> PRT

<213> *Stylonychia lemnae*

<400> 58

Met Ala Asp Asn Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Ser Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Thr Glu Glu Glu Leu Val Glu Ala Phe Lys Val Phe Asp Arg Asp
85 90 95

Gly Asn Gly Leu Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly His Ile Asn Tyr Glu Glu Phe Val Arg
130 135 140

Met Met Met Ala Lys
145

<210> 59

<211> 149

<212> PRT

<213> *Tetrahymena pyriformis*

<400> 59

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
Page 60

VOS0068 SEQUENCE LISTING-2_ST25

1 5 10 15
Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30
Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45
Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60
Asp Phe Pro Glu Phe Leu Ser Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80
Asp Thr Glu Glu Glu Leu Ile Glu Ala Phe Lys Val Phe Asp Arg Asp
85 90 95
Gly Asn Gly Leu Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110
Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125
Ala Asp Ile Asp Gly Asp Gly His Ile Asn Tyr Glu Glu Phe Val Arg
130 135 140
Met Met Met Ala Lys
145

<210> 60
<211> 13
<212> PRT
<213> Tetrahymena thermophila

<400> 60
Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe
1 5 10

<210> 61
<211> 149
<212> PRT
<213> Trypanosoma brucei

<400> 61
Met Ala Asp Gln Leu Ser Asn Glu Gln Ile Ser Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

VOS0068 SEQUENCE LISTING-2_ST25

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Gln Asp Gly Ser Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Leu Met Ala Arg Lys Met Gln Asp Ser
65 70 75 80

Asp Ser Glu Glu Glu Ile Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Ile Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Met Met Met Ser Lys
145

<210> 62
<211> 149
<212> PRT
<213> Trypanosoma cruzi

<400> 62

Met Ala Asp Gln Leu Ser Asn Glu Gln Ile Ser Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Gln Asp Gly Ser Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Leu Met Ala Arg Lys Met Gln Asp Ser
65 70 75 80

Asp Ser Glu Glu Glu Ile Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

VOS0068 SEQUENCE LISTING-2_ST25

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Met Met Met Ser Lys
145

<210> 63
<211> 149
<212> PRT
<213> Triticum aestivum

<400> 63

Met Ala Asp Gln Leu Thr Asp Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gln Asp Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Val Met Met Ala Lys
145

VOS0068 SEQUENCE LISTING-2_ST25

<210> 64
 <211> 147
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 64

Met Ser Ser Asn Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ala Leu Phe Asp Lys Asp Asn Asn Gly Ser Ile Ser Ser Ser Glu
 20 25 30

Leu Ala Thr Val Met Arg Ser Leu Gly Leu Ser Pro Ser Glu Ala Glu
 35 40 45

Val Asn Asp Leu Met Asn Glu Ile Asp Val Asp Gly Asn His Gln Ile
 50 55 60

Glu Phe Ser Glu Phe Leu Ala Leu Met Ser Arg Gln Leu Lys Ser Asn
 65 70 75 80

Asp Ser Glu Gln Glu Leu Leu Glu Ala Phe Lys Val Phe Asp Lys Asn
 85 90 95

Gly Asp Gly Leu Ile Ser Ala Ala Glu Leu Lys His Val Leu Thr Ser
 100 105 110

Ile Gly Glu Lys Leu Thr Asp Ala Glu Val Asp Asp Met Leu Arg Glu
 115 120 125

Val Ser Asp Gly Ser Gly Glu Ile Asn Ile Gln Gln Phe Ala Ala Leu
 130 135 140

Leu Ser Lys
 145

<210> 65
 <211> 135
 <212> PRT
 <213> *Gibberella intermedia*

<400> 65

Glu Ala Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Gln Ile Thr Thr
 1 5 10 15

Lys Glu Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Ser Glu
 20 25 30

VOS0068 SEQUENCE LISTING-2_ST25

Ser Glu Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Asn Asn Gly
35 40 45

Thr Ile Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys
50 55 60

Asp Thr Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Lys Val Phe Asp
65 70 75 80

Arg Asp Asn Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met
85 90 95

Thr Ser Ile Gly Glu Lys Leu Thr Asp Asp Glu Val Asp Glu Met Ile
100 105 110

Arg Glu Ala Asp Gln Asp Gly Asp Gly Arg Ile Asp Tyr Asn Glu Phe
115 120 125

Val Gln Leu Met Met Gln Lys
130 135

<210> 66

<211> 149

<212> PRT

<213> Epinephelus akaara

<400> 66

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Tyr Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

VOS0068 SEQUENCE LISTING-2_ST25

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Gln
130 135 140

Ile Met Thr Ala Lys
145

<210> 67
<211> 149
<212> PRT
<213> *Macrocyctis pyrifera*

<400> 67

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Ile Glu Ala Phe Lys Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Ile Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Met Met Met Ala Lys
145

<210> 68
<211> 149
<212> PRT

VOS0068 SEQUENCE LISTING-2_ST25

<213> *Ciona intestinalis*

<400> 68

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Asn
130 135 140

Met Met Thr Asn Lys
145

<210> 69

<211> 149

<212> PRT

<213> *Branchiostoma lanceolatum*

<400> 69

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

VOS0068 SEQUENCE LISTING-2_ST25

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Val Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Glu
130 135 140

Met Met Thr Ser Lys
145

<210> 70
<211> 153
<212> PRT
<213> Anopheles gambiae

<400> 70

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

VOS0068 SEQUENCE LISTING-2_ST25

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Gly Lys Ser Cys
130 135 140

Leu Ser Arg Pro His Gln Ala Leu Phe
145 150

<210> 71

<211> 156

<212> PRT

<213> Strongylocentrotus intermedius

<400> 71

Met Ser Gln Glu Leu Thr Ile Asn Ala Asp Gln Leu Thr Glu Glu Gln
1 5 10 15

Ile Ala Glu Phe Lys Glu Ala Phe Ser Leu Phe Asp Lys Asp Gly Asp
20 25 30

Gly Thr Ile Thr Thr Lys Glu Leu Gly Thr Val Met Arg Ser Leu Gly
35 40 45

Gln Asn Pro Thr Glu Ala Glu Leu Gln Asp Met Ile Asn Glu Val Asp
50 55 60

Ala Asp Gly Asn Gly Thr Ile Asp Phe Pro Glu Phe Leu Thr Met Met
65 70 75 80

Ala Arg Lys Met Lys Asp Thr Asp Ser Glu Glu Glu Ile Arg Glu Ala
85 90 95

Phe Arg Val Phe Asp Lys Asp Gly Asn Gly Phe Ile Ser Ala Ala Glu
100 105 110

Leu Arg His Val Met Thr Asn Leu Gly Glu Lys Leu Thr Asp Glu Glu
115 120 125

Val Asp Glu Met Ile Arg Glu Ala Asp Ile Asp Gly Asp Gly Gln Val
130 135 140

Asn Tyr Glu Glu Phe Val Thr Met Met Thr Ser Lys
145 150 155

<210> 72

<211> 149

<212> PRT

<213> Pleurotus ostreatus

VOS0068 SEQUENCE LISTING-2_ST25

<400> 72

Met Ala Asp Gln Leu Ser Glu Glu Gln Ile Ser Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Arg Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Lys Glu Ala Phe Lys Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Tyr Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Asn Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Met Met Leu Ser Lys
145

<210> 73

<211> 149

<212> PRT

<213> Caenorhabditis elegans

<400> 73

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
Page 70

VOS0068 SEQUENCE LISTING-2_ST25

50

55

60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Thr
130 135 140

Met Met Thr Thr Lys
145

<210> 74

<211> 149

<212> PRT

<213> Physarum polycephalum

<400> 74

Met Val Asp Ser Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Asn Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Ala Asp Thr
65 70 75 80

Asp Thr Glu Glu Glu Ile Arg Glu Ala Phe Lys Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Ser Asp Glu Glu Val Asp Glu Met Ile Arg Glu
Page 71

VOS0068 SEQUENCE LISTING-2_ST25
120 125

115

Ala Asp Val Asp Gly Asp Gly Gln Val Asn Tyr Asp Glu Phe Val Lys
130 135 140

Met Met Leu Ser Lys
145

<210> 75
<211> 149
<212> PRT
<213> Myxine glutinosa

<400> 75

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asn Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Tyr Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Gln
130 135 140

Met Met Thr Ala Lys
145

<210> 76
<211> 149
<212> PRT
<213> Paxillus involutus

VOS0068 SEQUENCE LISTING-2_ST25

<400> 76

Met Ala Asp Gln Leu Ser Glu Glu Gln Ile Ser Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Gly Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Arg Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Lys Glu Ala Phe Lys Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Tyr Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Thr Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Asp Glu Phe Val Lys
130 135 140

Met Met Leu Ser Lys
145

<210> 77
<211> 149
<212> PRT
<213> Gallus gallus

<400> 77

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

VOS0068 SEQUENCE LISTING-2_ST25

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Tyr Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Gln Val Asp Glu Met Ile Arg Glu
115 120 125

Ser Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Gln
130 135 140

Met Met Thr Ala Lys
145

<210> 78
<211> 146
<212> PRT
<213> Drosophila yakuba.

<400> 78

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

VOS0068 SEQUENCE LISTING-2_ST25

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Thr
130 135 140

Met Met
145

<210> 79
<211> 149
<212> PRT
<213> Branchiostoma floridae

<400> 79

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10

Phe Ser Leu Phe Asp Lys Asp Gly Asn Gly Asn Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Gly Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Lys Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Pro Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Lys
130 135 140

Met Met Thr Ser Lys
145

<210> 80
<211> 149
<212> PRT
<213> Solanum commersonii

<400> 80

VOS0068 SEQUENCE LISTING-2_ST25

Met Ala Asp Gln Leu Thr Glu Asp Gln Ile Ser Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
 20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
 35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
 50 55 60

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
 65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
 85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
 100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
 115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Asp Glu Phe Val Lys
 130 135 140

Val Met Met Ala Lys
 145

<210> 81
 <211> 149
 <212> PRT
 <213> Suberites domuncula

<400> 81

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
 20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
 35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Thr Asp Gly Asn Gly Thr Ile
 50 55 60

VOS0068 SEQUENCE LISTING-2_ST25

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Glu Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Thr Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Gly
130 135 140

Met Met Thr Ser Lys
145

<210> 82
<211> 149
<212> PRT
<213> Halocynthia roretzi

<400> 82

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Met Met Ala Arg Lys Met Lys Glu Thr
65 70 75 80

Asp Ser Glu Glu Glu Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

VOS0068 SEQUENCE LISTING-2_ST25

Ala Asp Ile Asp Gly Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Thr
130 135 140

Met Met Thr Cys Lys
145

<210> 83
<211> 149
<212> PRT
<213> Zea mays

<400> 83

Met Ala Asp Gln Leu Thr Asp Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Asp Glu Phe Val Lys
130 135 140

Val Met Met Ala Lys
145

<210> 84
<211> 149
<212> PRT
<213> Arabidopsis thaliana, Petunia hybrida, Medicago truncatula, Nicotiana
tabacum, Elaeis guineensis, Prunus avium

<400> 84

VOS0068 SEQUENCE LISTING-2_ST25

Met Ala Asp Gln Leu Thr Asp Asp Gln Ile Ser Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Val Met Met Ala Lys
145

<210> 85
<211> 149
<212> PRT
<213> Phaseolus vulgaris

<400> 85

Met Ala Asp Gln Leu Thr Asp Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

VOS0068 SEQUENCE LISTING-2_ST25

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Val Met Met Ala Lys
145

<210> 86

<211> 149

<212> PRT

<213> Capsicum annuum

<400> 86

Met Ala Asp Gln Leu Thr Asp Asp Gln Ile Ser Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Ile Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

VOS0068 SEQUENCE LISTING-2_ST25

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Asp Glu Phe Val Lys
130 135 140

Val Met Met Ala Lys
145

<210> 87
<211> 146
<212> PRT
<213> Toxoplasma gondii

<400> 87

Met Ala Asp Gln Leu Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala
1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu
20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
50 55 60

Asp Phe Pro Glu Phe Leu Thr Leu Met Ala Arg Lys Met Lys Asp Thr
65 70 75 80

Asp Thr Glu Glu Glu Leu Ile Glu Ala Phe Lys Val Phe Asp Arg Asp
85 90 95

Gly Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
130 135 140

Met Met
145

<210> 88
<211> 150
<212> PRT
<213> Daucus carota

<400> 88

VOS0068 SEQUENCE LISTING-2_ST25

Met Ala Asp Gln Leu Thr Asp Asp Gln Ile Ser Glu Phe Lys Glu Ala
 1 5 10 15

Phe Ser Leu Phe Asp Lys Asp Gly Asp Gly Cys Ile Thr Thr Lys Glu
 20 25 30

Leu Gly Thr Val Met Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu
 35 40 45

Leu Gln Asp Met Ile Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile
 50 55 60

Asp Phe Pro Glu Phe Leu Asn Leu Met Ala Arg Lys Met Lys Asp Thr
 65 70 75 80

Asp Ser Glu Glu Glu Leu Lys Glu Ala Phe Arg Val Phe Asp Lys Asp
 85 90 95

Gln Asn Gly Phe Ile Ser Ala Ala Glu Leu Arg His Val Met Thr Asn
 100 105 110

Leu Gly Glu Lys Leu Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu
 115 120 125

Ala Asp Val Asp Gly Asp Gly Gln Ile Asn Tyr Glu Glu Phe Val Lys
 130 135 140

Val Met Met Ala Lys Gly
 145 150